

What is claimed is:

1           1. A substrate processing device, comprising:  
2           a plurality of vacuum process chambers, each of which administers a  
3           prescribed process to a substrate therein;  
4           a through-chamber which constitutes a vacuum chamber, the plurality of  
5           vacuum process chambers are hermetically-connected to a perimeter of the  
6           through-chamber;  
7           a carry system which carries a substrate in sequence, via the through-  
8           chamber, to the plurality of vacuum process chambers, the carry system comprises  
9           a substrate holder which holds the substrate upright in such a way that a plate  
10          surface thereof forms an angle to the horizontal of between 45° and 90°; and  
11          a horizontal movement mechanism which moves the substrate holder via  
12          the through-chamber to the plurality of vacuum process chambers.

1           2. The substrate processing device described in Claim 1, wherein the  
2           through-chamber constitutes a direction-altering chamber comprising a direction-  
3           altering mechanism which alters the direction of movement of the substrate holder  
4           using the horizontal movement mechanism, wherein the direction-altering  
5           mechanism alters the direction of movement by rotating the substrate holder and  
6           the horizontal movement mechanism about a vertical rotating axis.

1           3. The substrate processing device described in Claim 2, wherein the  
2           direction-altering mechanism rotates the substrate holder and the horizontal  
3           movement mechanism about a rotating axis coincident with a center axis of the  
4           direction-altering chamber.

1           4.     The substrate processing device described in Claim 1, wherein the  
2     substrate holder holds two substrates simultaneously.

1           5.     The substrate processing device described in Claim 4, wherein the  
2     substrate holder holds the substrates upright in such a way that the plate surface  
3     thereof forms an angle to the horizontal of between 60° and 90°.

1           ~~6.~~     A substrate processing device, comprising:  
2             a plurality of through-chambers, each of which includes a hermetically-  
3     connected vacuum chamber;  
4             a plurality of processing chambers that are hermetically-connected to the  
5     plurality of through-chambers;  
6             a carry system that carries a substrate in sequence to the processing  
7     chambers, the carry system comprises a substrate holder which holds the substrate  
8     upright in such a way that a plate surface thereof forms an angle to the horizontal  
9     of between 45° and 90°; and  
10            a horizontal movement mechanism which moves the substrate holder to  
11     each of the processing chambers via at least a plurality of the through-chambers.

1           7.     The substrate processing device described in Claim 6, wherein the  
2     through-chambers each constitutes a direction-altering chamber comprising a  
3     direction-altering mechanism which alters the direction of movement of the  
4     substrate holder using the horizontal movement mechanism, wherein the direction-  
5     altering mechanism alters the direction of movement by rotating the substrate  
6     holder and the horizontal movement mechanism about a vertical rotating axis.

1           8.     The substrate processing device described in Claim 7, wherein the  
2     direction-altering mechanism rotates the substrate holder and the horizontal  
3     movement mechanism about a rotating axis coincident with a center axis of the  
4     direction-altering chamber.

1           9.     The substrate processing device described in Claim 6, wherein the  
2     substrate holder holds two substrates simultaneously.

1           10.    The substrate processing device described in Claim 9, wherein the  
2     substrate holder holds the substrates upright in such a way that the plate surface  
3     thereof forms an angle to the horizontal of between 60° and 90°.

1           ~~11.~~    A through-chamber having a perimeter to which a plurality of  
2     vacuum processing chambers are hermetically-connected, the through chamber  
3     comprising:  
4                a vacuum chamber;  
5                a horizontal movement mechanism including a substrate holder for holding  
6     a substrate, the horizontal movement mechanism horizontally moves the substrate  
7     holder through the vacuum chamber, and the substrate holder holds the  
8     abovementioned substrate upright in such a way that the plate surface thereof  
9     forms a holding angle to the horizontal of between 45° and 90°, and  
10              a direction-altering mechanism which alters the direction of movement of  
11     the substrate holder by rotating the substrate holder and horizontal movement  
12     mechanism about a vertical rotating axis.

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